

Two New Scorpions from the Northern Transvaal

by

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INTRODUCTION

Opisthophthalmus carinatus Peters and *O. wahlbergi* Thorell are common in South West Africa and Botswana, and it is thus not surprising that they should also be found just north of the Zoutpansberg in the northern Transvaal. The Albany Museum records *O. carinatus histrio* Thorell from Fleschfontein in the northern Transvaal. This locality is presumably Vleeschfontein on the farm Kalkfontein 115 in the north-western Transvaal. *O. carinatus histrio* is very near to the typical form, the main difference being a slightly greater pectinal tooth number and the absence of transverse grooves on the last sternite in the males. The "Vleeschfontein" ♂ example has 25/25 pectinal teeth. The new subspecies differs very considerably from both the typical form and the "Vleeschfontein" specimen. In the case of the new subspecies of *O. wahlbergi*, the main divergence from the typical form apart from colouring is the general robustness of its features.

Opisthophthalmus carinatus lawrencei subsp. nov., fig. 1a

Locality. ♂-holotype, ♀-allotype and 3 ♂-paratypes were collected on the "Johanna F. Uys Private Nature Reserve", Rochdale 700 MS, Waterpoort in the northern Transvaal, by the kind permission of P. J. Uys. **Habitat.** Specimens were found in shallow excavations beneath stones in the red sand at the base of the Zoutpansberg. The excavations were about 12 cm deep and about 30 cm long. **Collector.** G. Newlands, 18.vii.1967.

Opisthophthalmus carinatus lawrencei differs from *O. carinatus* and the other subspecies in the following characters:

Colour. Unique in the *carinatus* group, the tergites being a very dark grey, pedipalps and the anterior carapace lobes, brown; the legs yellowish brown and the sternites, olive green (Table 1).

Carapace. The median groove fork at the anterior margin of the carapace is very poorly developed. In dorsal view, the lateral margins of the carapace are convex and the anterior is much more rounded than in the other forms which have a virtually straight edged carapace which is trapezoidal in outline. The median eyes are almost at the centre of the carapace, their distance from the anterior margin being 0.54 of the carapace length. The carapace is granular throughout except for a polished area anterior to the median eyes; in the female it is less granular.

Tergites and sternites. The very fine granular nature of the tergites in the male imparts a matt appearance, in the female they are smooth. The sternites of both sexes are smooth but not polished.

Caudal segments. The caudal segments are of robust structure and proportion relative to the typical form. All the keels are distinctly granular. There are distinct dorsolateral keels on segments I and II. The inferior-median keels in segments I to III are raised and sharply defined. The posterior terminal tooth of the dorsolateral keels in segments II, III and IV is represented by a mere granule (Fig. 1a and b).

Telson. A noteworthy feature is the great size of the vesicle which is distinctly bulbous and swollen (Fig. 1a).

Pectinal teeth. Male 22-23; female 18-18.

Tarsi. Tarsi III and IV with 0 outer spines (5 on outer lobe) and 10 inner spines, inclusive of the distal inner lobe.

Note. This scorpion has been named in honour of Dr R. F. Lawrence of the Albany Museum, Grahamstown, who has done so much to advance arachnid systematics in South Africa.

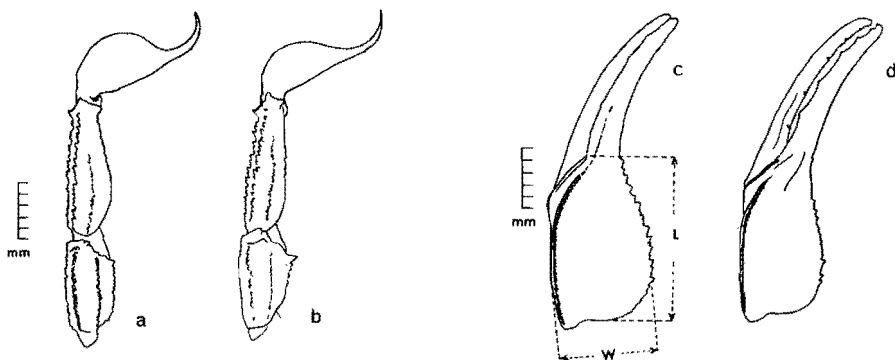


Fig. 1. The last caudal segments of (a) *Opisthophthalmus carinatus lawrencei* subsp. nov. and (b) *O. carinatus carinatus* Peters; and the pedipalps of (c) *O. wahlbergi robustus* subsp. nov. and (d) *O. wahlbergi wahlbergi* Thorell.

***Opisthophthalmus wahlbergi robustus* subsp. nov., fig. 1c**

Locality and collector. The ♂-holotype and ♀-allotype were collected at the "Crystal Salt" works, Zoutpan, 20 miles west of Waterpoort, northern Transvaal, by R. W. Cameron 26.vi.1968 and 24.vii.1968 respectively; 1 ♂- and 1 ♀-paratype with the same collection data, 24.vii.1968.

Opisthophthalmus wahlbergi robustus may be distinguished from *O. wahlbergi* and the other subspecies by virtue of the following features:

Colour. Generally somewhat darker than the typical form, being a reddish yellow in place of the usual yellow; the chelicerae are black (Table I).

Pedipalps. One of the most noteworthy features of this scorpion is the shape of the pedipalps. In the male, the hand is more rounded than the typical form, and the upper surface is distinctly convex. The greatest width of the hand to the finger keel is $1\frac{1}{2}$ times the median length (fig. 1c). The fingers are short and stout.

Caudal segments. The posterior terminal tooth of the dorsolateral keels of caudal segments II, III and IV is very poorly developed. In the typical form these teeth are distinct and enlarged. The segments are short and robust, in the male, the ratio of height to length of segment V is 1 to 3.4, while in the typical form this ratio is 1 to 4.2.

Pectinal teeth. Male 30–30; female 20–21.

The types of *Opisthophthalmus carinatus lawrencei* and *Opisthophthalmus wahlbergi robustus* have been deposited in the Albany Museum in Grahamstown; paratypes are in the author's collection.

TABLE 1. Colouration of the spirit preserved types as determined by the "Munsell Color Chart"

	<i>Opisthophthalmus carinatus lawrencei</i>	<i>Opisthophthalmus wahlbergi robustus</i>
Carapace anterior lobes	5YR3/2* (Dark reddish brown)	5YR4/8 (Yellowish red)
Pedipalp hand	5YR3/4 (Dark reddish brown)	10YR5/8 (Yellowish brown)
Walking legs	10YR5/6 (Yellowish brown)	10YR5/8 (Yellowish brown)
Abdominal tergites	5YR2/1 (Very dark grey)	2 5YR2/2 (Very dusky red)
Abdominal sternites	5Y4/3 (Olive)	10YR5/6 (Yellowish red)
Caudal segments laterally	5YR3/2 (Dark reddish brown)	—
Caudal segment I	—	10YR5/8 (Yellowish brown)
Caudal segment V	—	7.5YR3/2 (Dark brown)
Vesicle	5YR4/8 (Yellowish red)	2.5Y7/6 (Yellow)

*Colour code given in terms of hue, value and chroma.

TABLE 2. Measurements of the types in millimetres

	<i>O. carinatus lawrencei</i>		<i>O. wahlbergi robustus</i>	
	♂	♀	♂	♀
Carapace length	12.8	13.6	16.0	17.6
Carapace width (Max.)	12.5	14.4	14.6	15.8
Width of hand to finger-keel	8.0	9.5	8.3	10.3
Length of hand back	12.0	12.5	14.0	13.4
Length of movable finger	14.0	14.0	18.0	17.3
Total length of extended tail	49	47	56	47
Length of caudal segment V laterally . .	12.0	11.2	12.5	11.3
Height of caudal segment V (Max.) . . .	4.0	3.5	3.7	3.5
Maximum length of telson	12.5	12.0	14.0	12.0
Maximum height of vesicle	5.0	4.0	4.3	4.0
Width of vesicle	5.5	4.8	5.0	4.5
Pectinal teeth (left-right)	22–23	18–18	30–30	20–21

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